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# APPLICATION FOR UNITED STATES LETTERS PATENT

APPLICANT: BRIAN M. DUGAN  
18 John Street  
Tarrytown, NY 10591

TITLE: METHODS AND APPARATUS FOR  
MONITORING AND  
ENCOURAGING  
HEALTH AND FITNESS

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Brian M. Dugan  
Signature

10/30/00  
Date

DUGAN & DUGAN, L.L.P.  
18 John Street  
Tarrytown, New York 10591  
(914)332-9081

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METHODS AND APPARATUS FOR MONITORING AND  
ENCOURAGING HEALTH AND FITNESS

The present application claims priority from U.S. Provisional Patent Application Serial No. 60/162,502, filed October 29, 1999, which is hereby incorporated by reference herein in its entirety.

FIELD OF THE INVENTION

The present application relates to methods and apparatus for monitoring and encouraging health and fitness.

BACKGROUND OF THE INVENTION

A fitness craze has recently swept the United States and many other countries. From fat-free potato chips to treadmills, people around the world have become obsessed with weight loss and healthy living. Accordingly, record numbers of new fitness products/exercise equipment have emerged to meet this obsession (including stair climbers, treadmills, recumbent bicycles, ski machines, and the like). However, no convenient mechanism has been developed for monitoring and encouraging health and fitness.

SUMMARY OF THE INVENTION

To overcome the needs of the prior art, methods and apparatus are provided for monitoring and encouraging health and fitness. In accordance with a first aspect of the invention, an apparatus is provided that is adapted to assist in weight loss and exercise. The apparatus comprises a personal digital assistant (PDA) having computer program code adapted to assist in at least one of calorie counting, meal selection, meal suggestion, weight monitoring, weight loss or gain monitoring, fat consumption monitoring, sugar consumption monitoring and salt consumption monitoring. The

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Other objects, features and aspects of the present invention will become more fully apparent from the following detailed description of the preferred embodiments, the appended claims and the accompanying drawings.

FIG. 1 is a schematic diagram of an exemplary system for monitoring and encouraging health and fitness; and

### DETAILED DESCRIPTION

2

The server 102 may comprise any conventional server (e.g., one or more conventional microprocessors) having computer program code contained therein as described below. Each user device 104a-n may comprise a desk top computer, a lap top computer, a set top box, a personal digital assistant (PDA), an internet-capable telephone device and/or any other device capable of communicating with the server 102 via the network 106, and each user device 104a-n may have computer program code contained therein as described below. The network 106 may comprise a local area network (LAN), a wide area network (WAN), the Internet, an intranet, an extranet or any other network. In general one or more of the user devices 104a-n, the grocery store 108, and/or any other relevant third party may communicate with the server 102 or amongst one another via any communications medium (e.g., via telephone, via facsimile, via mail, etc.).

As stated, the server 102 and/or one or more of the user devices 104a-n may contain computer program code adapted to direct the server 102 and/or the one or more user devices 104a-n in accordance with one or more embodiments of the invention.

3

server 102 is a Web server, the user may employ one of the user devices 104a-n to log-on to a Web site administered by the server 102, and to provide information to the server 102. Relevant information may include any type of demographic information (e.g., age, weight, height, sex, etc.), geographic/address information (e.g., where the user lives, contact information, etc.), goals or objectives of the user (e.g., weight loss, healthier diet, exercise objectives, etc.) or any other relevant information. In general, information about the user may be provided to the server 102 by any mechanism (e.g., via mail, via e-mail, via telephone, via cellular telephone, via facsimile, etc.). For example, information may be received via one or more HTTP transmissions or via some other communications protocol.

In step 206, the server 102 monitors the performance of the user (e.g., receives information from one or more of the user devices 104a-n about the user's food intake and/or exercise level and/or generates historical information about the user's performance). In step 208, the server 102 provides feedback to the user based on the monitored performance of the user (e.g., encouragement to exercise more, not to eat certain foods, to eat certain foods, etc.). The feedback may be provided at any time (e.g., periodically, randomly, etc.) and by any means (e.g., via mail, via e-mail, via facsimile, via telephone, etc.).

In step 210, the user (optionally) may employ one or more of the user devices 104a-n to order groceries from the grocery store 108 (e.g., in accordance with the dietary goals of the user). For example, the system 100 may be configured so as to:

maintain on a PDA a list of grocery items purchased by a shopper;

display on the PDA at least one of the grocery items within the maintained list of grocery items;

allow selection of one or more of the displayed previously purchased grocery items;

display at least one of the grocery items within the maintained a list of grocery items based on prior use patterns of the shopper;

display a message that indicates that, based on prior use patterns of the shopper, at least one of the grocery items within the maintained list of grocery items should be purchased by the shopper;

e-mail the shopper;

display on a PDA a list of user-selectable grocery items;

allow selection of at least one of the displayed selectable grocery items;

display at least one characteristic of a selected grocery item (e.g., a characteristic selected from the group consisting of calories, fat content, salt content, cholesterol content, whether organically grown, whether low fat, whether suitable for diabetics, whether Kosher, price, size, shelf life and brand name);

display a comparison of at least one characteristic of a plurality of selected grocery items;

allow selection of the at least one characteristic.

rank a plurality of selected grocery items based on the at least one characteristic.

maintain on a PDA a list of grocery items purchased by a shopper;

generate a report based on the list of purchased grocery items;

generate a report selected from the group consisting of calorie consumption, fat

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consumption, sugar consumption, salt consumption  
and grocery cost;

e-mail a report;

generate a report periodically;

display on a PDA a list of prepared foods;

allow selection of at least one prepared food;

display a recipe for each selected prepared food;

display at least one user-selectable grocery item  
that is an ingredient of the recipe;

display the cost of preparing each selected  
prepared food based on the cost of user-selected  
ingredients.

display at least one user-selectable ingredient  
for the recipe based on a maintained list of  
grocery items purchased by a shopper;

display a date when each user-selected ingredient  
was previously purchased by the shopper; and/or

provide a link to a food preparation WEB site  
capable of generating a price quotation for the  
preparation of at least one selected prepared  
food.

In step 212, the process 200 ends.

The foregoing description discloses only exemplary  
embodiments of the invention, modifications of the above  
disclosed apparatus and method which fall within the scope  
of the invention will be readily apparent to those of  
ordinary skill in the art. For instance, in at least one  
embodiment of the invention, one or more of the user devices  
104a-n is a personal digital assistant (PDA) having an  
application (e.g., computer program code) adapted to assist  
in calorie counting (e.g., keeping track of caloric intake),  
meal selection, meal suggestion, weight monitoring (e.g.,  
via user entry or via a download from an electronic scale),

Exercise suggestions, exercise statistics (e.g., time exercised, distance run, type of exercise performed, historical data, etc.) may be stored/accessed via one or more of the user devices 104a-n. The information may be stored locally (e.g., within the PDA) or remotely (e.g., within the server 102). Additionally, a pulse monitor or other monitor may be provided that interfaces the PDA (e.g., by modifying the PDA if necessary to allow such an interface) and that automatically provides exercise information and/or calories-burned information to the PDA. A comparison of calorie intake versus calories burned may be automatically generated at any time (e.g., after a meal, at the end of the day, after exercise, etc.). Inspirational messages may be displayed (e.g., during exercise, prior to meal time, automatically if desired, etc.) to help with weight loss/exercise performance. Each PDA may be provided with a video game such as described in U.S. Patent No. 5,947,868 (which is hereby incorporated by reference in its entirety) to further inspire exercise.

7



Accordingly, while the present invention has been disclosed in connection with the preferred embodiments thereof, it should be understood that other embodiments may fall within the spirit and scope of the invention, as defined by the following claims.

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